URS/THE KEN R. WHITE COMPANY

Mailing Address: P.O. Drawer 6218 • Denver, Colorado 80206 3955 East Exposition Avenue • Suite 300 • Denver, Colorado • 303/744-1861



March 4, 1974

Christo and Jeanne-Claude Christo 48 Howard Street New York, New York 10013

> RE: Christo's Running Fence KRW No. 3031

Dear Christo and Jeanne-Claude:

Recently we discussed the procedures we must follow to obtain all of the approvals and permits needed before construction can begin on the Running Fence. You will recall that there are many such permits and, unfortunately, those from certain organizations must be obtained in a specified sequence. If each of the organizations in this sequence should actually take the minimum time which they quote for processing our applications, the permit process will still require six months! This would barely allow time for successful construction and display of the Running Fence during the fall of 1974.

As you see, in the process of getting the permits, timing is critical.

Construction and display of the Running Fence are limited to those months of the year in which the dairy farmers can allow us to use their fields and in which the weather is suitable for construction and display. Essentially, this means very late summer and early fall.

Thus, any delay at all in the permit process will almost certainly put off completion of your proposed work until the following year, and it is reasonable to expect that delay will occur somewhere along the line. You realize, of course, that such a delay would be not only disappointing, but very costly to you - costly as to land rents, insurance, bonds and labor and material prices.

Consequently, I believe we must do everything possible to minimize the time for each permit in that required sequence.

Approved For Release 2003/09/02 : CIA-RDP80R01731R001900040026



Christo and Jeanne-Claude Christo

- 2 -

3/4/74

We can minimize delay, it seems to me, in only two ways:

- By being certain that all of our applications are complete in every detail and by having ready the answers to all questions that may be raised.
- 2. By getting each government agency concerned to realize that timing is critical to us, so that they will act on our applications as promptly as possible.

The latter may be helpful with County applications, but it could be even more helpful in the case of the Corps of Engineers, to whom we must apply for a "Permit for Work in Navigable Waters." Our application will be presented initially to the Corps of Engineers, Regulatory Functions Branch, Department of the Army, at their San Francisco District Office. That office now has a backlog of permit applications which will take three to four months to process and, normally, they consider applications in the order they are received.

If we could prevail upon the Corps of Engineers to consider our application immediately upon receipt, rather than waiting until the backlog of applications has been considered, we might save much time and 1974 completion of the Running Fence would be feasible. It will help even further if we can convince the Corps of Engineers that the temporary nature of the project means that the impact on areas of their concern will truly be minimal. If the Corps realizes this, their actual work in processing our application may be reduced to a minimum, with the District Office making the decision and issuing the necessary letter of permission.

If Marty Abell is successful in accelerating the process of approval by Marin County and the California Coastal Commission (and I believe he will be) and if the Corps of Engineers acts quickly on our application, I believe that Christo's Running Fence will become a reality in 1974.

Sincerely yours,

URS/THE KEN R. WHITE COMPANY

Ernest C. Harris, Ph.D., P.E.

Project Engineer for the Running Fence

ECH:dje

CONSTRUCTION DETAILS SUMMARY

ZONES 1, 2, 3 & 4 OF

CHRISTO'S RUNNING FENCE

The attached pages 104 to 109, inclusive, from the structural computations for the Running Fence show the main features of construction in the various zones of the project. Additional detail can be provided if needed.

Prepared by

Ernest C. Harris, RE., PhD
Project Engineer for the
Running Fence
The Ken R. White Company

The attached sheets and the structural computations related to the design they summarize were prepared under my direct supervision and control.

Sargis S. Safarian, P.E. Vice President

The Ken R. White Company

PROFILE - OCEAN END OF RUNNING FENCE (NOT TO SCALE - LENGTH AND NUMBER OF PANELS WILL DIFFER FROM THAT PICTURED)

BEACH (BARRIER

EXPLANATION OF ZONES

7 PANELS MAXIMUM

@60'=420'MAXIMUM

ZONE 1 - CONSTRUCTION INLAND FROM BEACH

ZONE 2 - CONSTRUCTION ON BEACH ABOVE HIGH TIDE

(LOW-TIDE

WATERLINE

ZONE 3 - CONSTRUCTION IN TIDAL ZONE; LOWER EDGE OF FENCE VISIBLE AT LOW TIDE BUT SUBMERGED AT HIGH TIDE.

ZONE 4 - CONSTRUCTION IN WATER; LOWER EDGE ALWAYS SUB-MERGED; UPPER EDGE ABOVE HIGH TIDE AT INNEREND, BUT SLIGHTLY BELOW HIGH TIDE AT OUTER END.

FOR CONSTRUCTION DETAILS, SEE:

ZONE 1 - PGS 105 2 106

ZONE 2 - PG 107

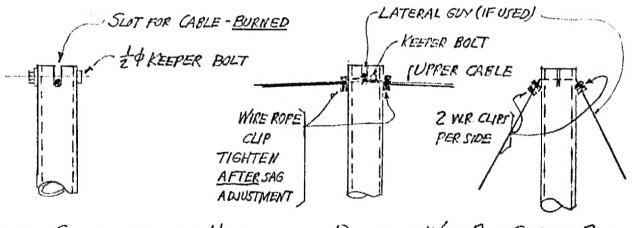
ZONE 3 - PG 108

ZONE 4 - PG 109

				TE COMPANY		Sheet 2
	A URS Systems Affiliate			CIA-RDP80R017	PAC	GE <u>/// 5</u> OF
	K FI W JOB NO. 30	031-800	DATE 2-18-7	A BY ECH	CHECKED B	y SR.
	CLIENT CHRISTO	& RUNNING	FENCE CORN	PROJECT A	UNNING FE	NCE (Date)
	SUBJECT ZONA	E 1 CONST	RUCTION -	- INLAND FA	ROM BEACH	4
-		END PANEL 20'0"(ON	TYPICAL IN	TERIOR PANEL	. [PPER CABLE -CONTINUOUS
	END PANEL WILL BE OMITTED	SLOPE) TOPSTRUTT	62:0" C/c PC AYERAGE	OLES - <u>MEASURE</u> <u>SLOPE</u> .	7) //// // // //	STEEL WIRE ROPE, 6×19.
	EXCEPT WHERE					
	NEEDED FOR	r				
	OR DETAIL.		NYL	ON FABRIC PAN	ICL WE	THE WIT
				4	' (LOWER CABLE, CONTINUOU 5/16 PREFORMED PLOW
	`\	TEND GU	V.C.	FOIL ANCHORS @	AFFROX	STEEL WIRE ROPE, 6 × 19
	REQUUET, CAPY		70	O'TO 22'5/c. CAPS SEE NOTE ** ON	KEND -0,200 TR.	
	FOR 2 ANCHORS =29,700 LB	MA	TOP CABL		F.	ROFILE
	-20,100 20		LAT. GUYS		Transport	Section Section 1971 - 1974 -
		D. D.				
		/ PLA	N- WITH 20-FT	END PANEL		
	SMGLE	END GUY7	,			
	REQD U	/)	TOP CABL	<i>E</i>		
	CAPY = 2	29,700 LB	LAT. GUYS	•		
		PLAN	- WITHOUT 2	OFT END PANEL		PIPE POST
		Section Commission	771111001 2			24-4×4×1-6
				,		A BOLT
				8-0 11714 11774 124,	,,,,	
	3"STD PIRE,		380	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		
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	Ø	No to	닉	A.	TERRAIN SE	DUCT FOR EFFECT OF
	~)	/	¥	1	** ON PAGE 107.
	8"HOLE,	TAMPED	- 2×8 WOO	D BLOCK	1012	Median Man 10.11
		SECTION	<u> </u>	(al prior

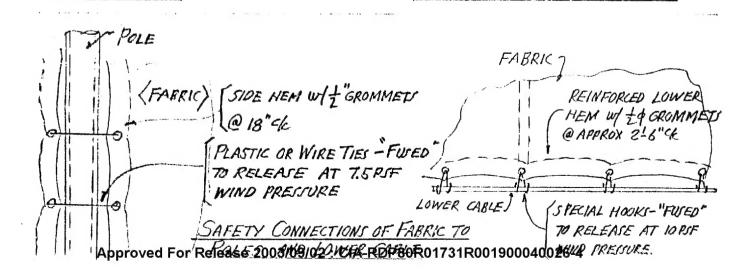
Approved For Release 2003/09/02 : CIA-FEP 80 F0 19000400 2614 PG 106 >

URS/THE KEN R. WHITE COMPANY Home Office 3955 East Exposition Avenue Avenue oved For Derver 2003 802 902 : CIA-RDP80R01731R001900040026-4 PAGE PAGE K R W JOB NO. 3031- 800 DATE 2-16-74 BY ECH CHECKED BY SECULIENT CHECKED BY SECULIENT CHECKED BY SUBJECT ZONE 1 CONSTRUCTION - CONT D	
SPECIAL HOOK-GROMMET TO CABLE, 12"CK HOOKS TEST CAPACITY 195 LB(+) TOP HEM. REINFORCED W/ WEBBING. 1/2"GROMMETS@12"CK	
DETAIL -CONNECTION OF FABRIC TO UPPER CABLE	



DETAIL - CONNECTION OF UPPER
CABLE TO POLE

DETAIL - WIRE ROFF CURS AT POLE FOR UPPER CABLE AND LAT. GUYS



Sheet 4

A URS Systems Affiliate

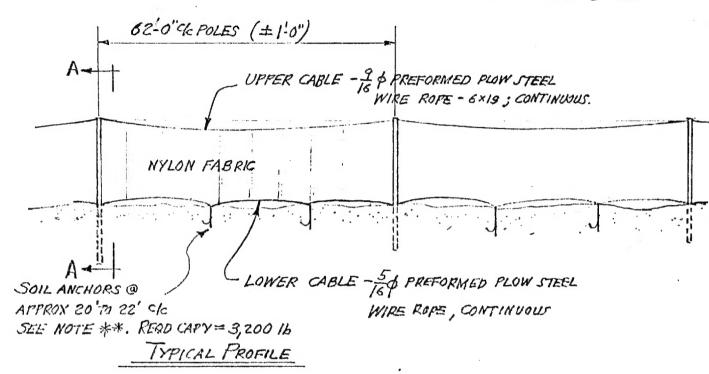
REAL PAGE 101 OF ______

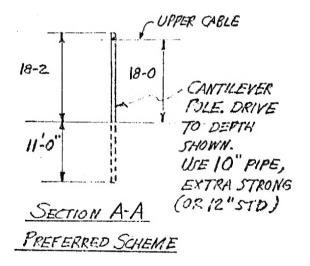
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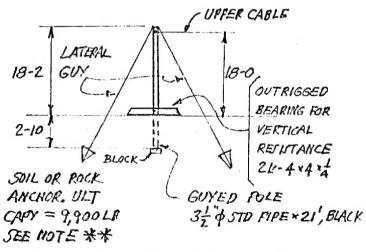
CLIENT CHRIST & RUNNING FENCE ORP. PROJECT RUNNING FENCE (Date)

SUBJECT ZONE 2 CONSTRUCTION - ON BEACH, ABOVE HIGH TIDE

NOTE: ALL DETAILS ON PG 106 APPLY TO ZONE 2 ALSO



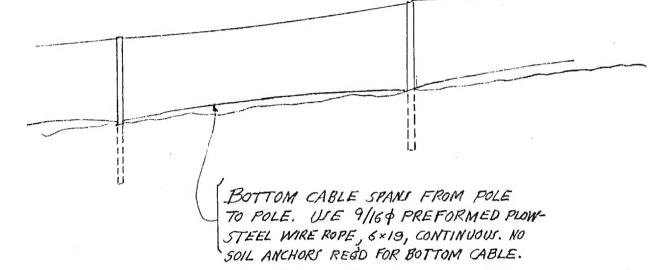




SECTION A-A ALTERNATE FOR USE WHERE TERRAIN & FOR SCIL DAYS NOT ALLOW GANTILEYER POLE.

NOTE ** ALL SOIL & ROCK ANCHORS (UNLESS NOTED) WILL BE AS MFD BY
FORESIGHT (NOUSTRIES OF CHEYENNE, WYOMING. ANCHOR TYPE AND DEPTH WILL BE
SELECTED FROM IN-SITU SOIL SHEAR TEST & TABLES OF STRENGTH TEST DATA
SUFFLIED RY FORESIGHT AND APPROVED BY KRW ENGINEER.
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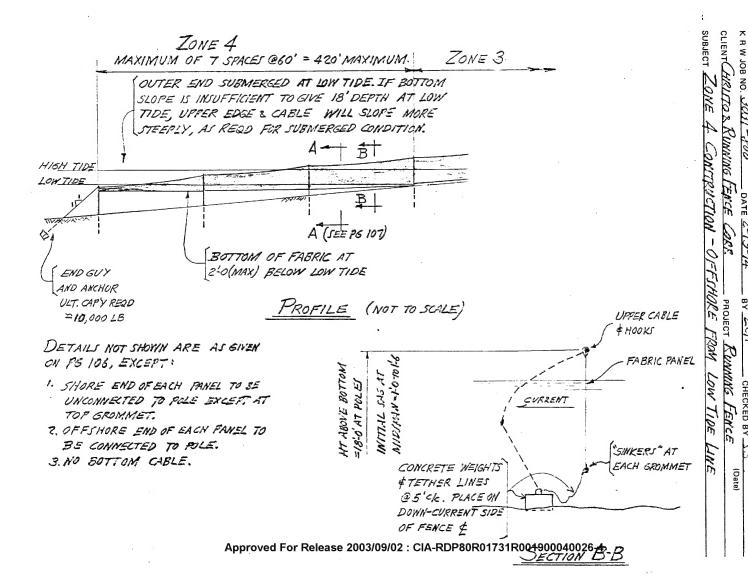
URS/THE KEN R. WHITE COMPANY	Sheet 5
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KRW JOB NO. 3031-530 DATE 2-15-74 BY ECH CH	IECKED BY
CHRISTO & RUNNING FENCE CORP. PROJECT RUNNING	NG FENCE (Date)
SUBJECT ZONE 3 CONSTRUCTION - BETWEEN WA	TERLINES FOR
HIGH AND LOW TIDE	



TYPICAL PROFILE - EXCEPT FOR DETAIL SHOWN HERE,

CONSTRUCTION IS IDENTICAL TO THAT FOR ZONE 2, FG 107 (AND

DETAILS ON PG 106).



URS/THE KEN R. WHITE COMPANY Home Office 3955 cas. --.
Denver, Colorado 3955 East Exposition Avenue

CHECKED BY

109

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KRW No. 3031 ECH, 2-18-74

MATERIALS REQUIRED FOR CHRISTO'S RUNNING FENCE TYPE AND DISPOSITION

At the conclusion of the Running Fence display period, the entire project will be carefully dismantled. All parts will be removed except for those deep-seated ground anchors which will remain completely invisible and whose removal would disturb the soil surface. Shallow ground anchors, and all soil anchors used in beach areas will be removed.

In general, all materials removed will become the property of the private landowner for his re-use for his own purposes. Material not wanted by the landowner will be removed and offered for purchase by others. Potential purchasers include other farmers, contractors and manufacturers.

Use and Type	Quantity (approx.)	Disposition
Nylon fabric	220,000 sq yd	Landowner reuse. (Or sell for reuse
(This fabric has alread purchased by the artical stored awaiting fabrical)	st and is	by others.)
Upper Cable 9/16 preformed wire rope	106,000 lin ft	Landowner reuse. (Or sell for reuse by others.)
Lower Cable 5/16 preformed wire rope	105,000 lin ft	Landowner reuse. (Or sell for reuse by others.)
Lateral Guys 7-strand twisted wire	80,000 ft	Landowner reuse. (Or sell for reuse by others, or recycle as scrap.)

Approved For Release 2003/09/02: CIA-RDP80R01731R001900040026-4

		₹
	Quantity	•
Use and Type	(approx.)	Disposition
Soil Anchors (or rock)-		
Lower cable anchors Guy anchors, lateral	3,50 0 3,700	Recycle as scrap. Leave embedded, or recycle as scrap.
Guy anchors, end	500	Leave embedded, or recycle as scrap.
Wire hooks for fabric attachment (several sizes and shapes)	4,950 lb	Recycle as scrap.
Poles (land portion) 3" and 3½" std pipe, 21' long	1,800	Landowner reuse. (Or sell for reuse by others.)
Poles (beach and ocean portion) 10" extra heavy pipe, 29' long	20	Sell for reuse.
Cable Clamps	10,000	Landowner reuse. (Or sell for reuse by others.)
Wood blocks 2 x 8 nominal x 8" (Scraps or lowest grade)	1,800	Leave underground.
Pole bases Steel angles, about 18" long	3,500	Landowner reuse, or recycle as scrap.
Pole Bolts ½-in. and 3/4 in.	3,600	Landowner reuse. (Or sell for reuse by others.)

Approved For Release 2003/09/02 : CIA-RDP80R01731R001900040026-4

Approved For Release 2003/09/02: CIA-RDP80R01731R001900040026-4 CHRISTO'S RUNNING FENCE

The "Running Fence" is a work conceived by and to be constructed by New York artist, Christo. This major, modern art project - like others of Christo's major works - will be temporary only. Though the preparation for the Running Fence will require possibly four months of field work, the display itself will be for a period not to exceed four weeks. Following this short display period, the Running Fence and its supporting structure will be removed, so that no visible evidence will remain.

The "Running Fence" will be 18 feet high and about 20 miles long, emerging from the ocean and following an undulating path inland. Its route and configuration have been selected so that natural beauty and that of the art work will complement each other. The route is shown by the plot plan and topographic maps included with the application.

The Running Fence will be of heavy, white nylon fabric, hung from a steel cable strung between steel poles. The poles, generally 60 feet apart, will be embedded three feet in the ground and braced laterally with guy wires and earth (or rock) anchors. The lower edge of the fabric will be anchored to the ground at about five-foot intervals, or tied to a lower cable which will be anchored every 15 to 25 feet.

Construction of the Running Fence will be a two-phase operation. Phase I, installation of the relatively inconspicuous structural parts-poles, guys, anchors and upper cable-will take about four months. In this stage, great care will be exercised to avoid environmental damage.

Phase II, unfurling and tie-down of the entire 20 miles of fabric, is planned to take place in one day! This will be possible by using many trained two- or three-person crews and assigning each crew its own, reasonably short length of the project. Their work on one day will be to clip the fabric panels to the cable and on the final day to unfurl the panels, tie them down at the bottom and lace them to the poles.

A safety feature of the Running Fence will be "fused" tiedowns and pole ties, designed to break and release the lower edge and sides of the fabric in the event of wind pressures

exceeding low specified limits. With only its upper edge attached, the fabric will then "spill" the wind and avoid damage to the poles, guys and anchorages. With return to lower wind speeds, the lower edge can be tied down again.

Ernest C. Harris, PhD, P.E. Senior Staff Engineer The Ken R. White Company 2-8-74

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Home Office 3955 East Exposition Avenue

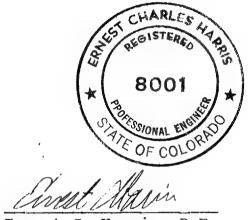
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PAGE		OF	

KRWJOBNO. 3031-800 DATE Feb. 8,1974BY E.C.H. CHECKED BY S.S.S.

CLIENT Christo (Running Fence Corp.) PROJECT Running Fence (Date)

Computation sheets for stability and strength of structural system of Christo's Running Fence under winds causing 20 psf resultant force on flat, vertical surfaces.



Ernest C. Harris, P.E.

The attached computation sheets, numbered pages 95 to 101, inclusive were prepared under my supervision and control.



Sargis S. Safarian, P.E.

CHRISTO'S RUNNING FENCE

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Ernest C. Harris, PhD, P.E. Senior Staff Engineer
The Ken R. White Company
2-8-74

URS/THE KEN R. WHITE COMPANY Home Office 3955 East Exposition Avenue roved For Relie as 8, 2003 30 990 2: CIA-RDP80R01731R001900040026-4
A URS Systems Alfiliate PAGE 95 OF
K R W JOB NO. 3031-800 DATE 2-7-74 BY ECH CHECKED BY S.3. (Date)
CLIENT CHRISTO PROJECT RUNNING FENCE (Date)
SUBJECT Analysis of Structural System Under 20-pot Wind Lood
GENERAL CONFIGURATION .
A INITIAL SAG = 1:6"
FABRIC (NYLON) DETAIL C
NOMINAL SPACING 60'-0" (GZ'-O"MAX.; LESS THAN 60'-0"
WHERE REQ'D BY TERRAIN, TURNS OR OBSTRUCTIONS)
A B POLE (NEXT PG)
TOP CABLE FABRIC
TO BREAK WHEN
WIND PRECTURE IS 7.5 TO 10 psf
OR ROCK ANCHOR) DETAIL C
3" & PIPE, STD, BLACK
6"(OR 8") SQUARE (ROUND) WOOD BLOCK, IK" THICK
BLOCK, I'K" THICK SECTION A-A SECTION A-A

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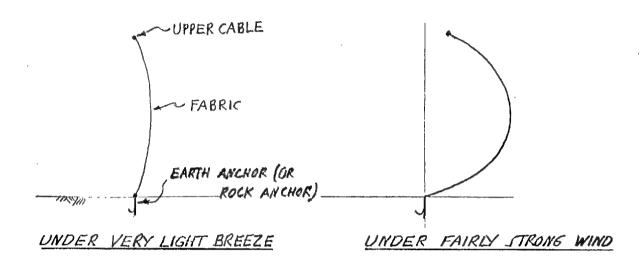
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K R W JOB NO. 3031-800 DATE 2-7-74 BY ECH CHECKED BY S.S.

CLIENT CHRISTO PROJECT RUNNING FENCE (Date)

SUBJECT Analysis of Structural System Under 20-psf Wind Load

GENERAL CONFIGURATION - CONT'D



FABRIC - ATTACHED AT TOP;

FREE AT ENDS AND BOTTOM

UNDER WIND CAUSING
FORCES OF OVER 10 PSF
ON VERTICAL SURFACE

LOOSE LINE TO PULL FABRIC IN
TO RE-TIE.

SECTION B-B FOR 3 CAPES OF WIND PRESSURE

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	D	env	er	, C	ol	or	ad	o	8	0	20){	9	

A URS Systems Affiliate	PAGE 97 OF
K R W JOB NO. 3031-200 DATE 2-7	-74 BY ECH CHECKED BY S.S
CLIENT CHRUTO	PROJECT RUNNING FENCE (Date)
SUBJECT	·

DESIGN CRITERIA

1. WIND FORCES

A. ON STRUCTURE WITH FABRIC IN PLACE, ANCHORED AT EACH END-

* 7.5 LB / SO FT OF VERTICAL PROJECTION

B. ON STRUCTURE WITH FABRIC IN PLACE, ANCHORED AT BOTTOM BUT FREE AT EACH END -

** 10:LB/SQ FT OF VERTICAL PROJECTION

C.ON STRUCTURE WITH FABRIC HELD BY UPPER EDGE ONLY, ENDS AND BOTTOM EDGES FREE -

20 : LB / SQ FT OF VERTICAL FROJECTION

* FUSED" POLE TIES WILL BREAK AT PRESSURES > 7.5 RIF * * FUSED" BOTTOM TIE-DOWN CORDS WILL BREAK AT PRESSURES > 10 PSF.

2. PRINCIPLE OF "FUSED" CONNECTIONS

FABRIC STRENGTH WOULD BE CONTROLLING FACTOR IF TIE-DOWNS WERE DESIGNED TO WITHSTAND ZO PSF WIND.

TO PROTECT FABRIC, POLE TIES AND TIE-DOWNS BREAK AWAY,
ALLOWING FABRIC TO FLY FREE. THIS "SPILLS" THE WIND,
REDUCING THE LOAD ON STRUCTURAL MEMBERS AND ALLOWS THEM
TO SURVIVE MUCH STRONGER WINDS WITHOUT DAMAGE.

WITH RETURN TO LOWER WIND VELOCITY, FABRIC EDGE AND BOTTOM THE CAN BE REPLACED AND THE DISPLAY RESUMED.

PROPER SIZE OF FUSED CONVECTIONS IS DETERMINED BY LAB. TEST AND VERIFIED BY USE ON FULL-SCALE PROTOTYPE TEST (IN COLORADO).

Approved For Release 2003/09/02: CIA-RDP80R01731R001900040026-4

Denver, Colorado 80209 A URS Systems Affiliate	PAGE 98 OF
K R W JOB NO. 3031-800 DATE 2-7-74	
CLIENT CHRISTO	PROJECT RUNNING FENCE (Date)
SUBJECT	

DESIGN CRITERIA - CONT'D

3. EARTH ANCHORS

ULTIMATE CAPACITIES AT VARIOUS DEPTHS AND IN VARIOUS SOILS
IS DETERMINED BY MANUFACTURER'S TEST. (FORESIGHT INDUSTRIES,
CHEYENNE, WYOMING).

SOIL PROPERTIES TO BE DETERMINED BY IN-SITU TEST AT EACH TYPE.

ANCHOR TYPE AND DEPTH FOR EACH LOCATION WILL BE SELECTED USING - RESULTS OF IN-SITU TEST;

MANUFACTURER'S TABLES

REQUIRED ULTIMATE CAPACITY WILL BE COMPUTED MAXIMUM WIND LOAD X FACTOR OF PAFETY, WHERE

 $F/S = \frac{3}{4} \times 1.6 = 1.2$; USE 1.3 UNLESS NOTED.

APPROX F/S FOR PERMANENT LOAD (AISC, ACT)

FACTOR FOR WIND (SHORT-TERM LOADING)

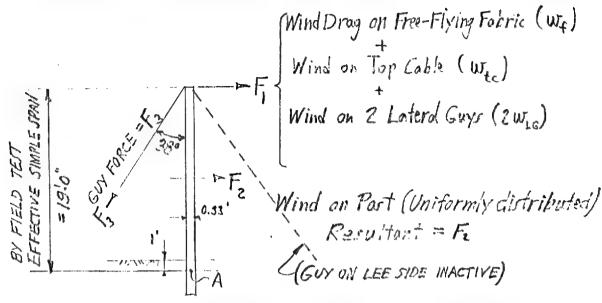
A. POLES

DESIGN BY AISC, BUT VERIFY BY PROTOTYPE TEST.

SUBJECT TO LATERAL WIND LOAD FROM FABRIC ONLY FOR WIND PRESSURES UP TO 7.5 PSF.

AT WIND PRESSURE OF 20 PSF, POLE U LOADED ONLY BY CABLE FORCES AT TOP AND BY WIND ON POLE ALONE.

JRS/THE KEN R. WHITE COMPANY ୬୭୯ ଟିଡ୍ରା Refea କ୍ରିଡ୍ରେ 2003/୪୬/02 ୯୯୮A-RDP80R01731R001900040026-4 KRW JOB NO. 3031-500 DATE 2-8-74 BY ECH CHECKED BY \$8 PROJECT RUNNIMS FENCE CLIENT CHRISTO SUBJECT ANALYSIS OF STRUCTURAL SYSTEM UNDER 20 PSF WIND LOAD



Wind Forces at 20 psf pressure on vertical flat surface:

$$W_{f} = C_{d}Aq$$
; $C_{d} = 0.05$, but double it to cover erratic flap, etc.; $W_{f} \in 0.1$
 $20psf = q(0.8 + 0.5) = 1.37$; $q = 20/13$ (Asce)
 $W_{f} \in 0.1$ (60'×18')(20/1.3) $\approx 1,660$ /b
 $W_{f} = wind on 60' of 9/184 wire rope$
 $= 20psf \times 60' \times 0.047' \times 0.60 = 34$ /b
(factor for cylindrical shape)
 $W_{f} = wind or 36' projection of 1/2' guys$
 $= 20 \times 36 \times 0.042 \times 0.60 = 18$ /b
 $= 20 \times 36 \times 0.042 \times 0.60 = 18$ /b

F = 20 × 18 × 0.33 × 0.60 = 7/ 16

Solve guy force and onchor load F3

By EM, =0 - $F_3 \sin 38^{\circ} \times 19 = 19F_1 + 10F_2 = 19 \times 1,712 + 10 \times 71 = 33,200$ F = 33,200 /(0.615×19) = 2,840 /b

မိုင္ဖီး For ဦးမွန္မြဲခ်ိန္ခ်ိန္ ဦးဝါဒီဘိုက္ခ်ိန္တဲ့ပုံးပုံသို-RDP80R01731R001900040026-4

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ATE 2-8-74	BY ECH CHECKED BY SS
	PROJECT PUNNING FENCE (Date)

SUBJECT ANALYSIS OF STRUCTURAL SYSTEM UNDER ZO PSF WIND LOAD

FACTORS OF SHEETY

CLIENT CHRISTO

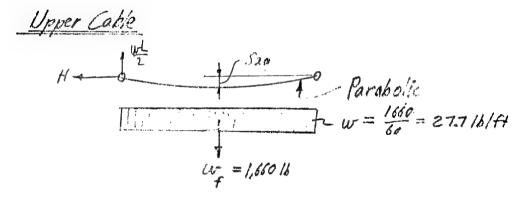
KRW JOB NO. 3031-200 D.

LATERAL GUY - VLT. STRENGTH = 10,000 lb. min.

LATERAL EVY ANCHOR -

SPECIFIED ULTIMATE @ NO SLIP = 10,000 16

: Loteral Guy System OK



Flan View

To be conservative, assume final sag = initial seg = 1.5°

$$H = WL^2/8S = 27.7(60)^2/(8 \times 1.5) = 8300 \text{ lb}$$

Capacity of 9/16 - 6 × 19 plow steel wire rape, preformed = 13.5 tone

Factor of Safety @ 20 psf wind = $\frac{2000 \times 17.5}{8,300} = 3.25$ OK

(Actually, FS > 3.25 since final sag under local and after stretching will be > 1.5°, as assumed.)

END GUYS UPPER CABLE SLOPES DOWN AT 45° TO FORM END GUY. LOAD = 8,300 17

FACTOR OF SAFETY UNDER 20 PSF WIND > 3.25 OR 2.3 A-Approved For Release 2003/09/02 : CIA-RDP80R01731R001900040026-4

URS/THE KEN R. WHITE COMPANY Home Office 3955 East Exposition Avenue Proved For Release 2003/09/02: CIA-RDP80R01731R001900040026-4 PAGE 101 K R W JOB NO. 303/- 800 DATE 2-8-74 BY ECH CHECKED BY 5 (Date)

CLIENT CHRUTO

PROJECT RUMING FENCE

CLIENT CHRUTO

PROJECT RUMING FENCE

SUBJECT ANALYSIS OF STRUCTURAL SYSTEM UNDER 20 per Wind Loan

POLE STRENGTH'

Vert. comp of 2,830 lb lateral guy '323' = F_3 cor 38° = 2,240 ll

""" elid guy '323' = F_3 cor 38° = 2,240 ll

Resultant

= F_2 = 71 lb 2 F_3 = F_4 = F_4

$\frac{f_a}{F_o} + \frac{C_m f_b}{(1 - \frac{f_b}{F_c})F_c} = 0.45 + \frac{1.0 \times 850}{(1 - \frac{3,100}{5,170})^2 22000 \times \frac{4}{3}} = 0.45 + 0.073 \ll 1.0$ $\therefore POLE OK$

CONCLUSIONS:

- 1. STRENGTH AND STABILITY OF STRUCTURAL SYSTEM OK UNDER 20 FOF WIND WITH FABRIC CONNECTED AT TOP UNLY & FUSED CONNECTIONS ALL OPENED.
- 2. PERFORMANCE OF FUSED CONNECTIONS HAS BEEN VERIFIED BY KRW LAB TEST AND BY FIELD TEST OF FULL-SCALE PROTOTY SECTION.
- 3. UNDER TORSE WIND FABRIC TIED DOWN, FACTORS OF SAFETY FOR

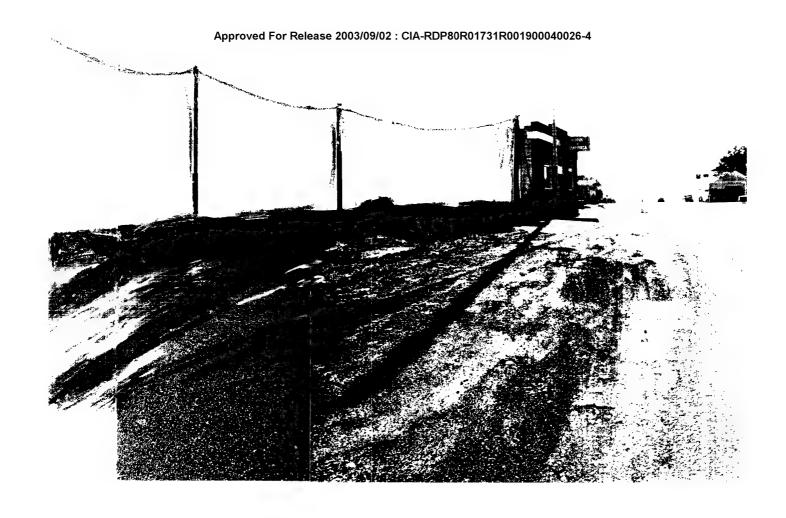
LATERAL GUYS - 1.3 MIN. (> FS OF AISC, UNDER WIND)

END GUYS - 1.5 MIN.

TIEDOWNS - 1.3 MIN.

4. AT VERTICAL AND HORIZONTAL CURVES, GUY AND POLE FORCES WILL BE MODIFIED FOR ADDITIONS DUE TO DIRECTION CHANGE. SAME FACTORS OF SAFETY WILL BE REQUIRED. COMPUTATIONS MUST

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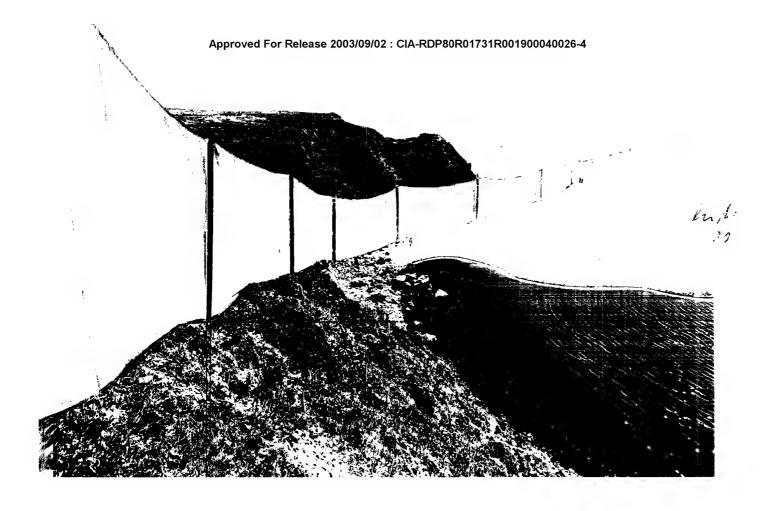


Ohristo: RUMNING FENCE 1973-74 Project for Sonoma County and Marin County, State of California Height: 18 Feet; Length: 20 Miles Photo: Harry Shunk

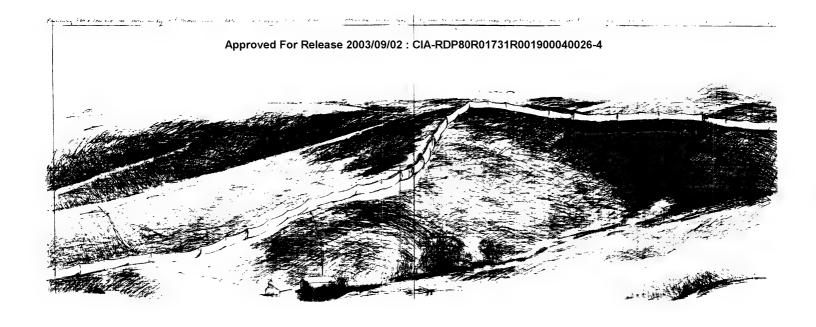
Christo: RUNNING FENCE 1973-74
Project for Sonoma County and
Marin County, State of California Height: 18 Feet; Length: 20 Miles. Photo: Harry Shunk



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Ultriote: RUMNING FENCE 1973-74 Present for Umousa County and marin country, at the of Cathornia tright, to even Length: 20 Miles Photo: Harry Shank



Shristo: RUNNING FENCE 1973-74 Project for Sonoma County and Marin County, State of California Neight: 13 Feet; Length: 20 Miles

Washer Harry Shanks





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Curring Force (motion For Toward County and Some founty that of California (and m)

Christo: RIINNING FENCE 1973-74
Project for Sonoma County and
Marin County, State of California
(height: 18 Feet: Length: 20 Miles
Thate: Harry Shank

HARRY SHUNK

